

# Charles “Cas” Smith

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## EDUCATION

### **Master of Science, Engineering Science**

Pennsylvania State University, University Park, Pa.

August 2013

GPA: 3.68

### **Bachelor of Science, Biological Engineering**

Louisiana State University, Baton Rouge, La.

May 2011

GPA: 3.54

## EXPERIENCE

### **NSF Graduate Research Fellow**

Department of Engineering Science, Penn State

July 2011 – July 2013

- Designed solar cells that use 96-98% less material while achieving same power output
- Optimized the design of these solar cells using CAD software to reduce the cost per watt
- Produced weekly presentations detailing my progress to ensure deadlines were achieved

### **Graduate Assistant**

Center for Nanotechnology Education & Utilization, Penn State

July 2011 – July 2013

- Counseled industry stakeholders from local, national, and international markets on manufacturing techniques used in the solar energy industry

### **Research Assistant**

Department of Biological Engineering, LSU

May 2010 – June 2011

- Planned and executed an experiment to study the life cycle and risks of nanotechnology
- Led the design of a water purification system that mimicked a plant's water harvesting method

### **Director of Sustainability**

Student Government, LSU

May 2009 – May 2010

- Devised and implemented programs that reduced campus waste going to landfills by 77%

### **Student Worker**

Department of Biological Engineering, LSU

January – April 2009

- Designed and initiated a university-scale energy reclamation system and presented its cost-benefit analysis to campus administration for future implementation

## HONORS & DISTINCTIONS

**Graduate Research Fellowship**, National Science Foundation

2012

**Licensed Engineer**, NCEES national licensing council

2010

## SERVICE & LEADERSHIP

**Vice President**, American Solar Energy Society

**Volunteer**, Elementary school STEM fairs

**Secretary**, Graduate Student Council

**Volunteer**, Habitat for Humanity

**Eagle Scout**, Boy Scouts of America

Penn State

State College, Pa.

Penn State

Baton Rouge, La.

Lafayette, La.

## INTERESTS

Scrutinizing and cataloguing material waste through social media channels (search for the hashtag: #WasteCatalogue); fixing broken things rather than throwing them 'away'; bicycling and running when the weather allows